

Reform and the senior secondary school

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Traditional ways of thinking about learning, assessment and educational qualifications are being challenged.

This challenge is coming in part from the introduction of new learning technologies, but also under challenge are traditional ways of organising learning, such as timed, lock-step courses and age-based curricula. Universities are feeling the impact of these challenges as online courses reshape teaching and learning and raise questions about the future role of education institutions. Schools, too, are being impacted by new technologies and new ways of thinking about learning and assessment. Senior secondary schools may be less affected to date, but is the writing on the wall?

Here are three challenges that the senior secondary school can expect to face.

Learning: an ongoing and long-term process

A first challenge comes from new ways of thinking about learning itself.

Increasingly, learning is recognised as a continuous, cumulative and potentially lifelong process through which individuals develop deeper understandings, more sophisticated knowledge and higher levels of skill. Because nobody graduating from an education institution today is equipped with all the knowledge and skills they require for the future, learning is inevitably an ongoing process. As a result, there is a need for long-term perspectives on learning that transcend where and how knowledge and skills are acquired – perspectives that are blind to education sectors, workplaces, year levels, ages and transition points.

But there is another reason for adopting a long-term perspective on learning, and that is a growing appreciation that learners of the same age or year level can be at very different points in their learning. For example, in any given year of school, the most advanced 10 per cent of students are typically five to six years ahead of the least advanced 10 per cent of students. Meeting the very different needs of these students requires a long-term view of learning coupled with a belief that, although learners may be at vastly different points in their learning, every individual is capable of further progress if they can be motivated and provided with appropriately challenging learning opportunities.

In practice, long-term perspectives on learning are undermined when the motivation for learning is not so much to build on past learning and lay foundations for future learning as to compete with other learners or to satisfy formal requirements. When learning is treated more as a means to an end than an end in itself (for example, learning in order to get a job rather than learning to do a job), short-term perspectives and artificial endpoints to learning can be created, often encouraging cramming and learning-to-forget.

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With greatly increased participation in the senior secondary school, students on entry are inevitably at very different stages in their learning. The challenge is to meet individuals at their varying points of need with appropriately challenging learning activities, and to monitor and acknowledge the learning progress they make across the senior years. In other words, the focus needs to shift from judging and grading students on the same learning expectations to the ongoing monitoring of individual growth and to recording the points students reach in their long-term progress by the completion of school.

Courses that present the same body of content and grade all students against the same expectations regardless of their starting points tend to be inconsistent with a view of learning as long-term progress. The same is true when courses in the same subject are offered at different levels; lower-level courses can place artificial limits on the points some individuals can attain in their learning.

A general challenge is to redesign teaching and learning in ways that recognise and respond to the very different stages that students are at in their learning, set stretch challenges for every learner and monitor learning progress over extended periods of time.

Assessment: establishing where learners are in their learning

A second challenge arises from new expectations of assessment.

Increasingly, assessment processes are being expected to provide information about the knowledge, skills and understandings that learners can demonstrate at the time of assessment. Information about what a person knows, understands and can do is being sought in an absolute sense, independently of how those capabilities were achieved.

Assessment information of this kind can be contrasted with more traditional uses of assessment to grade and compare. For example, a grade of C+ or a test score of 65 per cent often provides little or no useful information about what a student knows, understands and can do. Similarly, a reading age of 6.4 or knowledge that a child performed at the 75th percentile for their age provides little or no information about the child's reading skills. And an Australian Tertiary Admission Rank (ATAR) of 89.5 conveys no substantive information about what a student has achieved. Many assessment processes are designed more to judge, grade and compare students on how well they have learnt what they have been taught than to establish, understand and communicate what they know and can do.

In post-school settings, employers are seeking better evidence that employees have specific knowledge, skills and attributes, including general attributes such as the ability to work in a team, solve problems, think creatively and solve new problems. Some employers are seeking this evidence not through traditional qualifications, but through more direct evidence of what learners can do, including micro-credentials, learning badges and short-course certificates. At the same time, universities are using more varied evidence of students' knowledge, skills and attributes in their admissions decisions.

In schools, there is a greater focus on using assessments to establish and understand where students are in their learning regardless of their age or year level, to identify appropriate starting points for teaching and learning, and to monitor the progress that individuals make over

time. These uses of assessment in the service of learning can be contrasted with the use of assessment simply to grade all students on how well they perform against common year-level expectations.

For many students, assessment in the senior secondary school culminates in, and is dominated by, the ATAR. In other words, for many students, senior secondary assessments primarily result in a ranking, the purpose of which is to allow tertiary institutions to select prospective students. Because the focus is on attainment upon completing school, there has been little focus on using assessments to monitor learning progress across the senior years. And because, for many students, the ultimate goal is a percentile rank, there has been little interest in describing and understanding what individuals know, understand and can do upon completing school. In the senior secondary school, assessment in the interests of learning tends to take second place to assessment for the purposes of grading, ranking and selecting.

A general challenge is to redesign assessment processes so that their primary purpose is to establish and understand where individuals are in their learning (that is, what they know, understand and can do) upon entry and at various times across the senior years. This would provide a better basis for targeting teaching on student needs, monitoring the progress that individuals make over time and recording the points students reach by the end of school.

Curriculum: focusing on what matters

A third challenge relates to the kinds of learning valued in the senior secondary school.

Two current trends in curriculum are an increasing emphasis on learners' abilities to apply what they learn to real-world situations and an increasing focus on general skills and attributes required for contemporary life and work. These two trends are having an influence at all levels of education and training.

The ability to apply knowledge to new situations and non-standard problem types requires a deep understanding of the essential ideas and principles of a learning area. Such understandings go beyond the recall of facts and the application of standard routines and algorithms. Although it remains important for learners to acquire deep knowledge, because information is now much more readily accessible in digital form, the recall of detail is usually less important than an understanding of principles and concepts that allow knowledge to be applied to previously unseen contexts.

In post-school settings, it is now well established that experts in any field not only have a deep knowledge base, they also organise their knowledge around sophisticated understandings. Experts know a lot, but they also have unusually deep understandings of a relatively small number of principles and big ideas that allow them to see patterns in information and to apply their knowledge to new situations.

In schools, there is now less interest in students' abilities to memorise and recall large amounts of factual detail and more interest in their ability to understand and apply what they are learning. This is sometimes referred to as a 'literacy' perspective. For example, the Organisation for Economic Cooperation and Development (OECD)'s assessments of mathematical literacy and scientific literacy are focused not on how much students have memorised but on how well they

can use key mathematical and scientific ideas and principles in the solution of meaningful, real-world problems.

Many senior secondary courses were designed to ensure that students have the subject knowledge they will require for further study at university. For this reason, many subjects introduce students to factual and procedural knowledge on a wide range of topics, meaning that teachers lack time to develop deep understandings. A general challenge is to rethink the amount of content in some courses with a view to developing students' deeper understandings of a narrower range of fundamental ideas.

At the same time, there is increasing recognition of the importance of skills and attributes such as collaborating and working in teams, communicating, researching, creating and innovating, and thinking critically. These capabilities are sometimes referred to as '21st century skills' because of their increased relevance and importance to life and work in the 21st century.

In post-school settings, universities identify 'graduate attributes' that all students are expected to develop regardless of their courses of study. These include skills in thinking critically; solving problems; creating and innovating; communicating in various contexts and modes; working both autonomously and collaboratively; gathering, analysing, evaluating and using information; behaving in socially and culturally responsible ways; and taking personal responsibility for ongoing learning.

In schools, the Australian Curriculum expects teachers to teach and assess a number of 'general capabilities' that include literacy; numeracy; information and communication technology (ICT) capability; critical and creative thinking; personal and social capability; ethical understanding; and intercultural understanding.

Teaching and learning in the senior secondary school continue to be strongly focused on the acquisition of bodies of subject-specific content. A general challenge is to explore ways of giving greater priority to the development and assessment of skills and attributes required for contemporary life and work. For example, consideration could be given to providing opportunities for students to work collaboratively on meaningful, complex problems that require the application of learning from a number of disciplines, and then using performances on these cross-disciplinary problems as sources of information about the development of students' general capabilities.

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